CLAIM AMENDMENTS

Please amend claims 1, 7, 18, and 22 as follows:

1. (Currently amended) An ophthalmic lens worn on the surface of the eye and having a blended design for a segmented optical zone, comprising an anterior surface and an opposite posterior surface, wherein the anterior surface includes a vertical meridian, a horizontal meridian, a central optical zone having at least a first optical zone for primary gaze, a second optical zone for down-gaze and an optical blending zone between the first and second optical zones,

wherein the ophthalmic lens is characterized by having minimal or no ghost images or blur when transitioning between the first and second optical zones,

wherein the first optical zone is located in the upper portion of the central optical zone and the second optical zone is located in the lower portion of the central optical zone, and

wherein the optical blending zone has a surface that ensures a smooth surface transition from the first optical zone to the second optical zone and that allows the first and second optical zone to be designed independently and optimally so that ghost images or blur from the first and second optical zones is minimized or eliminated.

2. (Original) The ophthalmic lens of claim 1, wherein the apex of first optical zone coincides with the center of the central optical zone, wherein the vertex center of the second optical zone is located at the intersection point of the vertical meridian or a line which is parallel to the vertical meridian and passes through the center of the central optical zone with its boundary line with the optical blending zone, and the distance between the vertex center of the second optical zone and the apex of the first optical zone is 1.5 mm or less .

3. (Original) The ophthalmic lens of claim 2, wherein a first line passing through the vertex center of the second optical zone and the center of curvature at the vertex center of the second optical zone intersects a second line passing through the apex of the first optical zone and the center of curvature at the apex of the posterior surface, wherein the intersection point is within 2 mm or less of the center of curvature at the apex of the base optical surface.

4. (Original) The ophthalmic lens of claim 2, wherein the distance between the first and second optical zones along the vertical meridian or a line parallel to the vertical meridian and passing through the center of the central optical zone is 1.0 mm or less.

5. (Original) The ophthalmic lens of claim 4, wherein the distance between the first and second optical zones along the vertical meridian or a line parallel to the vertical meridian and passing through the center of the central optical zone is 0.05 mm or less.

6. (Original) The ophthalmic lens of claim 1, wherein the optical blending zone has a mirror symmetry with respect to a plane cutting through the vertical meridian or a line parallel to the vertical meridian and passing through the center of the central optical zone.

7. (Currently amended) The ophthalmic lens of claim 6, wherein the surface of the optical blending zone has a localized curvature or optical power much higher than either of the first and second optical zones so that the optical blend zone ~~axial light~~ will refract light away from the macular region of the eye of the wearer.

8. (Original) The ophthalmic lens of claim 6, wherein the width of the optical blending zone increases from the vertical meridian or a line parallel to the vertical meridian and passing through the center of the central optical zone to the periphery of the central optical zone.

9. (Original) The ophthalmic lens of claim 7, wherein the width of the optical blending zone is 0.1 mm or less at the center and 1 mm or less at the periphery of the central optical zone.

10. (Original) The ophthalmic lens of claim 2, wherein the ophthalmic lens includes mechanical features to maintain positional and rotational stability of the lens on the eye.

11. (Original) The ophthalmic lens of claim 10, wherein the mechanical features are selected from the group consisting of: a prism ballast that uses a varying thickness profile to control the lens orientation; a faceted surface in which parts of the lens geometry is removed to control the lens orientation; a ridge feature which orients the lens by interacting with the eyelid; double slab-off features which have a top slab-off zone and a bottom slab-off zone zones to maintain the lens orientation on the eye; and non-prism ballast features in the peripheral zone of the lens, the peripheral zone surrounding the optical zone of the lens.

12. (Original) The ophthalmic lens of claim 11, wherein the ophthalmic lens comprises on the anterior surface a ramped ridge zone which is disposed below the optical zone and includes an upper edge, a lower ramped edge, a latitudinal ridge that extends outwardly from the anterior surface, and a ramp that extends dowardly from the lower ramped edge and has a curvature or slope that provides a varying degree of interaction between the ramped ridge zone and the lower eyelid of an eye depending on where the lower eyelid strikes the ramped ridge zone.

13. (Original) The ophthalmic lens of claim 11, wherein the anterior surface has a peripheral blending zone extending outwardly from the central optical zone, a peripheral zone surrounding the blending zone, and an edge zone circumscribing and tangent to the peripheral zone, wherein the peripheral blending zone has a surface which ensures that the peripheral zone, the peripheral blending zone and the central optical zone are tangent to each other, wherein the peripheral zone has a surface that, in combination with the posterior surface, provides in the peripheral zone of the lens a thickness profile which is characterized (1) by having a lens thickness which increases progressively from the top of the lens downwardly along each of the vertical meridian and lines parallel to the vertical meridian until reaching a maximum value at a position between the anterior optical zone and the edge zone and then decreases to the edge of the edge zone, or (2) by having a mirror symmetry with respect to a plane cutting through the vertical meridian, by having a substantially constant thickness in a region around the horizontal meridian and by having a thickness which decreases progressively from the horizontal meridian to the top or bottom of the contact lens along each of the vertical meridian and lines parallel to the vertical meridian.

14. (Original) The ophthalmic lens of claim 2, wherein the first optical zone include a vertically oriented coma-like aberration that is more myopic in the inferior sections of the optical zone to create an intermediate vision region.

15. (Original) The ophthalmic lens of claim 2, wherein the first and/or second optical zones include spherical aberration that is less myopic in the periphery of that optical zone.

16. (Original) The ophthalmic lens of claim 2, wherein the first and second optical zones provide a cylindrical optical power to correct astigmatic vision errors.

17. (Original) The ophthalmic lens of claim 2, wherein the outward flares of the blend zone will refract off axis light to the retina of the eye such that the light provides a visual cue as to the orientation and/or translation of the lens.

18. (Currently amended) A method of manufacturing an ophthalmic lens worn on the surface of the eye and having a blended design for a segmented optical zone, comprising the steps of:

designing the anterior surface and the posterior surface the ophthalmic lens, wherein the anterior includes a vertical meridian, a horizontal meridian, a central optical zone having at least a

first optical zone for primary gaze, a second optical zone for down-gaze and an optical blending zone between the first and second optical zones,

wherein the first optical zone is located in the upper portion of the central optical zone and the second optical zone is located in the lower portion of the central optical zone, wherein the first and second optical zones are designed independently from each other and in a way so that ghost images or blur from transition between the first and second optical zones is minimized or eliminated, wherein the optical blending zone has a surface that ensures a smooth surface transition from the first optical zone to the second optical zone and that allows the first and second optical zone to be designed independently and optimally so that the designed lens is characterized by having minimal or non ghost images or blur when transitioning between ~~from~~ the first and second optical zones ~~is minimized or eliminated~~.

19. (Original) The method of claim 18, wherein the apex of first optical zone coincides with the center of the central optical zone, wherein the vertex center of the second optical zone is located at the intersection point of the vertical meridian or a line parallel to the vertical meridian and passing through the center of the central optical zone with its boundary line with the optical blending zone, and the distance between the vertex center of the second optical zone and the apex of the first optical zone is 1 mm or less .

20. (Original) The method of claim 19, wherein a first line passing through the vertex center of the second optical zone and the center of curvature at the vertex center of the second optical zone intersects a second line passing through the apex of the first optical zone and the center of curvature at the apex of the posterior surface, wherein the intersection point is within 2 mm or less of the center of curvature at the apex of the base optical surface.

21. (Original) The method of claim 20, wherein the distance between the first and second optical zones along the vertical meridian or a line parallel to the vertical meridian and passing through the center of the central optical zone is 0.5 mm or less.

22. (Currently amended) The method of claim 19, wherein the optical blending zone has a mirror symmetry with respect to a plane cutting through the vertical meridian or a line parallel to the vertical meridian and passing through the center of the central optical zone and has a localized curvature or optical power much higher than either of the first and second optical zones so that the optical blending zone ~~light~~ will refract light away from the macular region of the eye of the wearer.

23. (Original) The method of claim 22, wherein the width of the optical blending zone increases from the vertical meridian or a line parallel to the vertical meridian and passing through the center of the central optical zone to the periphery of the central optical zone.

24. (Original) The method of claim 23, wherein the width of the optical blending zone is 0.1 mm or less at the center and 1 mm or less at the periphery of the central optical zone.

25. (Original) The method of claim 19, wherein the ophthalmic lens includes mechanical features to maintain positional and rotational stability of the lens on the eye.

26. (Original) The method of claim 19, wherein the first optical zone includes a vertically oriented coma-like aberration that is more myopic in the inferior sections of that optical zone to create an intermediate vision region.

27. (Original) The method of claim 19, wherein the first and/or second optical zones include spherical aberration that is less myopic in the periphery of that optical zone.

28. (Original) The method of claim 19, wherein the first and second optical zones provide a cylindrical optical power to correct astigmatism vision errors.

29. (Original) The method of claim 19, further comprising the steps of producing the ophthalmic lens by a manufacturing means.

30. (Original) The method of claim 29, wherein the manufacturing means is a computer-controllable manufacturing device.

31. (Original) The method of claim 30, wherein the computer controllable manufacturing device is a numerically controlled lathe.